Food and Chemical Toxicology

An international journal published in association with BIBRA

Author and Subject Indexes to Volume 30 1992

Pergamon

FOOD AND CHEMICAL TOXICOLOGY

An international journal published in association with BIBRA

Founding Editor

The late Leon Golberg

Editors

JOSEPH F. BORZELLECA
Department of Pharmacology and Toxicology, Medical College of Virginia, Richmond, VA 23298-0613, USA

MARCEL B. ROBERFROID
Unité de Biochimie Toxicologique et Cancérologique, Université Catholique de Louvain, UCL 7369, B-1200 Brussels, Belgium

Associate Editor

STUART E. JAGGERS
BIBRA International, Woodmansterne Road, Carshalton, Surrey SM5 4DS, UK

Review Editor

FRANCIS J. ROE
19 Marryatt Road, Wimbledon Common, London SW19 5BB, UK

Managing Editor

TUAN A. HÔ

Editorial Assistant

STELLA HILL

BIBRA International, Woodmansterne Road, Carshalton, Surrey SM5 4DS, UK

International Editorial Board

M. W. ANDERS, *USA*
M. ANDERSEN, *USA*
L. S. ANDREWS, *USA*
P. H. BACH, *UK*
H. BARTSCH, *Germany*
A. R. BOOBIS, *UK*
J. CALDWELL, *UK*
C. C. CAPEN, *USA*
W. W. CARLTON, *USA*
J. E. CHAMBERS, *USA*
S. M. COHEN, *USA*
T. F. X. COLLINS, *USA*
J. W. DANIEL, *UK*
D. J. DOOLITTLE, *USA*
D. J. ECOBICHON, *Canada*
V. J. FERON, *The Netherlands*
M. A. GALLO, *USA*
S. D. GANGOLLI, *UK*
P. GRASSO, *UK*
G. C. HARD, *USA*
A. W. HAYES, *USA*
H. d'A. HECK, *USA*
D. HENSCHLER, *Germany*
I. KIMBER, *UK*
J. H. KOEMAN, *The Netherlands*
J. C. LHUGUENOT, *France*
M. I. LUSTER, *USA*
R. M. MCCLAIN, *USA*
H. I. MAIBACH, *USA*
K. MORGAN, *USA*
A. MUNSON, *USA*
B. J. PHILLIPS, *UK*
J. POPP, *USA*
R. PREUSSMANN, *Germany*
I. F. H. PURCHASE, *UK*
D. RAY, *UK*
I. ROWLAND, *UK*
R. SCHEUPLEIN, *USA*
R. C. SHANK, *USA*
T. SUGIMURA, *Japan*
J. A. SWENBERG, *USA*
S. L. TAYLOR, *USA*
J. A. THOMAS, *USA*
J. C. TOPHAM, *UK*
H. VAINIO, *France*
J. H. WEISBURGER, *USA*

Publishing Office

Elsevier Science Ltd, Bampfylde Street, Exeter EX1 2AH, UK
[*Tel.*: Exeter (01392) 51558; *Fax*: (01392) 425370]

Production Editor: Linda Smith

Subscription and Advertising Offices

North America: *Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, USA*
Rest of the World: *Elsevier Science Ltd, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1BG, UK*
[*Tel.*: Oxford (01865) 843000; *Fax*: (01865) 843010]

Subscription Rates

Annual Institutional Subscription Rates 1995: North, Central and South America, US$924.00, Rest of the World, £620.00. Associated Personal Subscription Rates are available on request for those whose institutions are library subscribers. Sterling prices exclude VAT. Non-VAT registered customers in the European Community will be charged the appropriate VAT in addition to the price listed. Prices include postage and insurance and are subject to change without notice.

Back Issues

Back issues of all previously published volumes, in both hard copy and in microform are available direct from Elsevier Science offices.

Published monthly. Copyright © 1994 Elsevier Science Ltd

Second class postage paid at NEWARK, NJ. Postmaster send address corrections to *Food and Chemical Toxicology*, c/o Elsevier Science Inc., 660 White Plains Road, Tarrytown, NY 10591-5153, USA.

Index of Authors

Aardema M. J., 505
Abbott P. J., 327
Abma P. M. H., 749
Adams K., 389, 397
Afzal M., 525
Agarwal K., 627
Ahmed M. M., 525, 719
Åkesson A., 281
Al-Bekairi A. M., 525, 719
Albrecht R., 133, 723
Allan G., 57
Alldrick A. J., 853
Allen J. A., 389, 397
Andersen O., 703
Anderson D., 29
Andrzejewski D., 325
Anliker R., 635
Arakawa N., 765
Aranyi C., 269
Aruna K., 953
Aruoma O. I., 483
Asano T., 631
Aune T., 139
Ayrton A. D., 289

Bach P. H., 205
Bacon C. W., 233
Banerjee T. S., 161
Baroncelli S., 715
Bartsch H., 859
Basketter D. A., 65, 165
Baughman S., 57
Belicza M., 193
van den Berg H., 749
Beynen A. C., 731
Blaauboer B. J., 17, 589
Black T. N., 263
van Bladeren P. J., 17, 589
Blaszcak D. L., 1051
Boisset M., 133
Boncristiani G., 759
Boonyaphiphat P., 673
Böttger D., 1
Boysen B. G., 417, 431
Brandt I., 871
Brantom P. G., 475, 567
Brindley C. J., 57
Brinkworth M. H., 29
Brittebo E., 871
Brock A., 37
Brooker P. C., 389, 397
Brusick D. J., 403
Bucher J. R., 997
Bucher J., 737
Bulhack P., 263
Burdock G. A., 559

Caldwell J., 145, 467, 831, 891
Carter J. L., 411
Čeović S., 183
Chakrabarti A., 161
Chakrabarti J., 161, 627
Chan V. S. W., 831
Chappel C. I., 351, 411, 417, 431, 445
Chasseaud L. F., 57
Chen W. L., 891
Chengjiany B., 957
Choy W. N., 903
Ciaralli L., 715
Cojocel C., 1
Collins T. F. X., 263
Cook W. M., 567
Cox D. N., 903
Creasy D. M., 475, 567
Cukierski M. J., 903
Curnow R. N., 313
Curren R. D., 505
Curry A. S., 1051

Das M., 517, 967
Das R. K., 1045
Dash B. C., 1045
Delacruz L., 205
Devor D. E., 783
Dieter M. P., 997
Diomede L., 789
Diwan B. A., 251
van Dokkum W., 427, 749
Donnini M., 789

Ebert E., 1031
Ehling G., 1031
El-Dessouki S., 993
Emerson J. L., 411, 417, 431
Eriksson C., 871
Eryi X., 957
Eustis S. L., 737
Evans J. G., 937

Falke H. E., 17, 589
Fiddler W., 325
Field W. E., 417, 431
Ford G. P., 475, 567
Ford R. A., 559
Frayssinet C., 133
Friedman M., 689
Frohlich A. A., 709
Fuchs R., 201
Fujita T., 1005
Fujitani T., 1021
Furihata C., 859
Furukawa F., 837

Galloway S. M., 403
Gamer A. O., 915
Gangolli S. D., 475, 567
Garg K., 517, 967
Gaudin H., 105
Gaworski C. L., 269
Gettings S. D., 1051
Ghosh A., 865
Ginter E., 1011
Graf U., 843
Gregg N. J., 205
Grolier P., 723
de Groot A. P., 601
Gross G. A., 491
Grüter A., 491

Hack R., 1031
Hagiwara A., 673
Halliwell B., 483
Han C., 521
Haodong S., 957
Harrison P. T. C., 333
Hasegawa R., 979
Haseman J. K., 737
Hawkes W. C., 903
Heck J. D., 269
Henika P. R., 689
Hewitt P., 891
Heyland S., 491
Hellwig J., 915
Hiasa Y., 117
Hinke K., 37
Hô T. A., 853
Ho Y. S., 695
Højbjerg S., 703
Holliger E., 843
Hood A. J., 57
Hosaki Y., 71
Hotchkiss S. A. M., 145, 891
Houben G. F., 427, 749
Howell J. C., 351, 359
Hrabar A., 183
Hudecová A., 1011
Huff J. E., 737
Hult K., 201

van Iersel A. A. J., 17
Inoue S., 631
Ioannides C., 289
Ito J., 71
Ito K., 247
Ito N., 673, 859, 979

Jäckh R., 915
Jagannath D. R., 403
Jägerstad M., 681
Jameson C. W., 997
Janezic S. A., 611
Jang J.-J., 783
Janssen G. B., 731
Jekat F. W., 803
Johansson G., 281
Jones E., 389, 397
Jonker D., 1057
Jung R., 1, 635

Kadowaki H., 41
Kari F. W., 737
Karrer D., 715
Kasuga F., 631
Kato T., 617
Kaufmann W., 915
Kawabe M., 673
Kawazoe S., 247
Kemper F. H., 803
Kemppainen B. W., 795
Khan Z. A., 719
Khanna S. K., 517, 967
Kikugawa K., 617
Kimber I., 165
Kimura S., 41, 49
Kitahori Y., 117
Klimisch H.-J., 915
Klungsøyr L., 239
Kniewald J., 879

Konishi N., 117
Konstantinopoulos M., 585
Kränzlin R., 843
Krogh P., 213
de Kruif C. A., 17, 589
Kumagai S., 631
Kurata Y., 251
Kuroda K., 1005

Laignelet L., 575
Lake B. G., 99, 105, 937
Lander F., 37
Lankas G. R., 297
Lee J. K., 307
Legrum W., 771
Leist K.-H., 1031
Lewis D. F. V., 289
Lhuguenot J.-C., 575
Lhuissier M., 723
Licht B. H., 365, 375, 383
Lickly T. D., 225
Lii J.-D., 127
Lin J.-K., 695
van der Linden E. C. M., 589
Loft S., 927
Logsdon D. L., 783
Loprieno G., 759
Loprieno N., 759, 809
Lovell W. W., 155
van Loveren H., 427, 749
Lück E., 1
Luisetti M., 789

MacDonald D. A., 225
MacKenzie K. M., 411, 417, 431
Machemer L., 1061
Madhyastha M. S., 709
Maier P., 843
Marini M. G., 789
Marquardt R. R., 709
Marshall A. D., 467
Märtins T., 1061
McCarthy K. L., 505
McEwen G. N. Jr, 1051
McLean A. E. M., 29
Mehta M., 795
Meijer G. W., 731
Mendoza M., 365, 375, 383
Midgley I., 57
Miller J. M., 145
Mitsumori K., 837
Miwa T., 41, 49
Mizutani T., 247
Mjelva B. B., 239
Morimoto J., 117
Morita S., 1005
Mukherjee A., 161, 627
Mukherjee D., 161
Müller W., 1
Murphy P. G., 225
Myers D. V., 359, 365, 375, 383

Naito H., 673
Nakama A., 1005
Nakaoka S., 117
Narbonne J. F., 723
Nelshoppen J. M., 455
Nestel P. J., 585
Nestmann E. R., 403
Netter K. J., 771
Nielsen J. B., 703
Nishikawa A., 837
Nishioka H., 117
Noda T., 1005
Noordhoek J., 17, 589
Norred W. P., 233

O'Donnell M. W. Jr, 263
Ockhuizen Th., 427, 749
Ohshima H., 859
Oishi S., 1015
Omaye S. T., 903
Orr J., 365, 375, 383
Osborne D. J., 99
Otaka T., 41, 49
Otaki Y., 49
Otsuka M., 765
Otte J., 927

Pauluhn J., 1061
Pélissier M.-A., 133, 723
Penninks A. H., 427, 749, 1057
Pensabene J., 325
Perin L., 789
Pestka J. J., 499
Peter C. P., 297
Petsel S. R. W., 411, 417, 431
Pike E., 37
Plattner R. D., 233
Pleština R., 177
Poulsen H. E., 927
Price R. J., 99, 105, 937
Proudlock R. J., 397
Purchase R., 475, 567
Putman D. L., 505

Qazi N. S., 719
Qureshi S., 525, 719

Radonić M., 189
Radošević Z., 189
Rahman M. F., 945
Rahnster B., 281
Rangga-Tabbu C., 921
Rao A. V., 611
Rao J. V., 945
Rao S. H., 945
Rasooly L., 499
Record I. R., 585
Reiming S., 957
Reuterswärd A. L., 681
Richold M., 389
Rivière J.-L., 575
Robertson L. W., 723
Roddy M. T., 1051
Rodriguez I., 307
Romano M., 789
Rowe R. R., 891
Rowland I. R., 853
Roy D., 161
Rutten A. A. J. J. L., 601

Sakashita Y., 765
Sakimoto K., 71
Salmona M., 789
Sanders D. J., 155
Šarić M., 183
Sarma A. B., 161
Sato M., 837
Scardefield S., 455
Schiffmann D., 669
Schlatter J., 669, 843
Schoenig G. P., 445
Scholes E. W., 65
Schut H. A. J., 9
Seinen W., 427, 749
Selim S., 445
Seymour J. L., 505
Shah A. H., 525, 719
Sharma A., 865
Shaw K., 365, 375, 383
Shen M., 521
Shephard G. S., 277
Sheu C. W., 307
Shichino Y., 859
Shimizu M., 1005
Shimizu Y., 41
Shirai T., 673
Siess M. H., 723
Šimić B., 879
Singh G. B., 517, 967
Singletary K. W., 455
Sivaramakrishnan V. M., 953
Skog K., 681
Sleight S. D., 921
Smith C., 365, 375, 383, 483
Sørensen H., 927
Šoštarić B., 193
Spanhaak S., 427, 749
Speijers G. J. A., 731
Sphon J., 325
Stabell O. B., 139
Stafford R. G., 795
Stanley J., 411, 417, 431
Stavric B., 533
Steffenak I., 139
Steinle D., 635
Sternitzke A., 771
Suschetet M., 723
Swamy A. N., 945
Sydenham E. W., 277

Tacconi M. T., 789
Tada Y., 1021
Takahashi M., 837
Takahashi O., 89, 1015
Takahashi T., 41, 49
Talukder G., 865
Tamagawa M., 41, 49
Tanaka T., 1015
Tatematsu M., 859
Težak Ž., 879
Thiel P. G., 277
Thomas W. C., 505
Torigoe Y., 71
Toyoda K., 837
Tsai L.-C., 127
Tsuda M., 765
Turillazzi P. G., 715

Uda F., 41

Vahter M., 281
Valencia R., 505
Vesonder R. F., 233
Vikse R., 239
Vollmuth T. A., 269
Vos J. G., 749
Voss K. A., 233
Vukelić M., 193

Walker R., 289
Wallig M., 455
Walters D. G., 99, 105
Ward J. M., 251, 783
Whitehead A., 313
Willhite C. C., 903
Winterhoff H., 803
Wortelboer H. M., 17, 589

Wu G., 521
Würgler F. E., 843

Xili L., 957

Yamada A., 1005
Yamamoto H.-A., 887, 973
Yamano T., 1005
Yamin S., 945
Yang L. L., 505
Yen G.-C., 127
Yin Y., 521
Yoneyama M., 1021
York R. G., 269
Yoshida K., 247
Yuan J. H., 997
Yuengming W., 957

Zhiyian H., 957
Zu H.-X., 9

Index of Subjects

A549 cell line ambroxol use in paraquat poisoning 789
Acetaldehyde ethyl phenylethyl acetal 1S
1-Acetoxy-1-ethynyl-2-*sec*-butylcyclohexane 3S
4-Acetoxy-3-pentyltetrahydropyran 5S
Acetylsalicyclic acid see Aspirin
2-Acetyl-4(5)-tetrahydroxybutylimidazole toxicity studies in F344 rats 417, 427
Acridine phototoxicity testing in guinea-pigs 155
Acrylic acid genetic toxicology 505
Acute toxicity renal, of thiabendazole in mice 1021
Adenosine receptors coffee and 548
Aflatoxin B_1 antimutagenic effects of Maillard browning products 127 ... preneoplastic foci promoted by phenoclor DP6 133
Aflatoxins in cosmetics containing aflatoxin-producing fungi 993
AIN-76A purified diet 601
Albumin antioxidant action against phenolic dietary compounds 483
Algal toxin (lyngbyatoxin A) skin penetration 795
Alkaloids potato, genotoxicity absent 689
Allergen detection, local lymph node assay (LLNA) comparison with guinea pig maximization test (GPMT) 65
Allergic contact dermatitis see Contact dermatitis
Allergic hives 1,1,1-trichloroethane 828
Allergy Coamidopropyl betaine (CAPD) 827 ... latex and fruit 665 ... latex gloves and 665
Allylbenzene 1-hydroxy metabolites, unscheduled DNA synthesis induction 831 ... unscheduled DNA synthesis induction 831
Amaranth behavioural effects 1076
Ambroxol in paraquat poisoning 789
Ames test see *Salmonella typhimurium* test
Amino acids Maillard browning products and antimutagenic effects 127 ... as nitrite scavenger 617 ... tyrosine levels in brain increased by cyanide 973
2-Amino-3-methylimidazo[4,5-*f*]quinoline see IQ
Ammonia Caramel Colour see Caramel colour III
Amylcyclopentenone 7S
Anaemia isopropylethylene glycol ether and 665
***trans*-Anethole** cytotoxicity and influence of modulators of epoxide metabolism 467
Animals alternatives in toxicology, book review 661 ... ethics of use in biomedical research, book review 1069
Anthracene phototoxicity testing in guinea pigs 155
Anticarcinogenic effects Indian plant products 953
Anticholinesterase agents chronic subclinical dietary intake during spraying season 37
Anti-inflammatory drugs isopropanol effect on inflammation 631
Antimutagenic effects coffee 547 ... ellagic acid 289 ... germanium oxide 521 ... Maillard browning products 127
Antioxidants albumin action 483 ... BHT see Butylated hydroxytoluene (BHT)
Antipyrine indolyl glucosinolate effect on metabolism of 927
Arachidonic acid hepatic activation of dietary genotoxins 853
Aroclor 1254-induced hepatic microsomes coumarin metabolism 99
Aromatic amines heterocyclic, HPLC sensitivity optimization for detection 491
Aromatic aminosulphonic acids carcinogenicity and genotoxicity review 635
Ascorbic acid lipid peroxidation in guinea-pigs intoxicated with cadmium 1011 ... protection against caesium toxicity 865 ... supplementation effect on biodisposition of benzanthrone 967
Aspirin decreased risk of death from colon cancer 348
Asthma coffee and 545 ... occupational, cellulose and xylanase 348
Atherosclerosis (see also Coronary heart disease) ... dietary ergotamine and 731
Atrazine effect on oestradiol-receptor complex 879

$B6C3F_1$ mice caramel colour IV toxicity and carcinogenicity 431 ... ground red chilli (*Capsicum annuum*) feeding study 783 ... hydroquinone carcinogenicity and toxicity 737 ... γ-oryzanol carcinogenicity 49 ... tragacanth gum carcinogenicity absent 673
BALB/3T3 cells proliferation and transformation by sodium orthovanadate 307
Balkan endemic nephropathy clinical features 189 ... epidemiology 183 ... features 177 ... ochratoxin A role 201, 205 ... pathomorphology 193
Basin leaves anticarcinogenic effects 953
Beef cooked and micronuclei formation 664 ... fried patties, mutagen formation inhibited by carbohydrates 681
Beer Caramel Colour III in 417
Behavioural effects amaranth 1076
Benzaldehyde propylene glycol acetal 9S
Benzanthrone biodisposition in guinea pigs and ascorbic acid supplementation effect 967 ... biodisposition in rodent species 517
Benzoic acid percutaneous absorption 891
Benzo[*a*]pyrene antimutagenic effects of Maillard browning products 127
Benzyl acetate percutaneous absorption 145
BHT see Butylated hydroxytoluene (BHT)
Bikaverin unscheduled DNA synthesis in hepatocytes 233
Biodisposition benzanthrone in guinea pigs, ascorbic acid supplementation effect 967 ... benzanthrone in rodent species 517
Biotechnology foods produced by, review of book on safety assessment strategies 817
Biotransformation enzymes indole-3-carbinol effects on 589
Birth weight fish oil effect 827
Bladder cancer coffee and risk of 540
Blindness household detergents 828
Blood coagulation see Coagulation ... tetrachloroethene levels 828
Boric acid foetal toxicity 1077

Bovine eye–chicken egg chorioallantoic membrane (BE–CAM) assay alternative to eye irritation methods 1061
Bovine serum albumin as nitrite scavenger 617
Brain tyrosine levels increased owing to cyanide 973
Breast cancer coffee and risk of 540
Bromoxynil tissue-binding and toxicity in olfactory mucosa 871
Brussels sprouts blood coagulation and 664 ... effect on cytochrome *P*-450 profile and phase II enzymes 17
DL-**Buthionine sulphoximine** glutathione depletion and thiabendazole nephrotoxicity in mice 247
Butylated hydroxytoluene (BHT) haemorrhages due to 89 ... inhibition of mammary tumorigenesis 455 ... nephrotoxicity in mice 89
2-*sec*-Butylcyclohexanone 11S
2-*tert*-Butylcyclohexyl acetate 13S
2-Butyl-4,4,6-trimethyl-1,3-dioxane 15S

C57B1/6J mice phytosterols inhibiting colon carcinogenesis 611
Cadmium faecal elimination in subjects on mixed/lactovegetarian diets 281 ... lipid peroxidation and ascorbic acid effect 1011
Cadmium chloride mutagenicity inhibited by germanium oxide 521
Caecal enlargement ethyl acetoacetate feeding study 567
Caesium chloride fruit extracts protecting against toxicity 865
Caffeic acid forestomach and kidney tumours 347
Caffeine calcium excretion 546 ... cerebral blood flow 545 ... effect on preterm and newborn infants 544 ... ergogenic agent 549 ... headache caused by withdrawal 545 ... metabolism and dosing effects 546 ... miscellaneous effects 549 ... mood and sleepiness 541 ... review of research 533
Calcium excretion, and caffeine 546
Cancer genesis, and coffee 541 ... risk and coffee 539
Capsicum annuum feeding study in B6C3F$_1$ mice 783
Caralluma tuberculata effects on cyclophosphamide-induced changes in mice 719
Caramel Colour I characterization 375 ... short-term genotoxicity tests 397
Caramel Colour II characterization 375 ... subchronic toxicity study 411
Caramel Colour III 2-acetyl-4(5)-tetrahydroxybutylimidazole in 417, 427 ... characterization 375 ... effects on immune system 749 ... effects on lymphocyte number 427 ... genotoxicity assessment 403 ... immunotoxicity, human *v.* rat study data 427 ... toxicity studies 417
Caramel Colour IV absorption, distribution and excretion of colour fraction 445 ... characterization 365 ... genotoxicity assessment 403 ... high molecular weight colour fraction (HMCF) 445 ... toxicity and carcinogenicity in rodents 431
Caramel colours characterization and specifications 359 ... chemistry 361 ... development of specifications 383 ... historical introduction 351 ... history of safety 355 ... manufacture and chemical nature 360 ... mutagenic and clastogenic activity absent 389
Carbohydrates formation of mutagens in fried beef patties inhibited 681
Carbonic anhydrase clorsulon with inhibitory activity and hyperplasias 297
Carcinogen classification, ranking and handling 823 ... definition 328 ... environmental, book review 818 ... in food, review 327 ... human exposure, book review 341 ... natural and synthetic, in food 329 ... rapid bioassay system (DEN-PH) for screening 979 ... testing for 330 ... threshold dose level and risk factors 330 ... tumour formation inhibited by soy sauce component 827
Carcinogenesis ochratoxin A 205, 213 ... phytosterols inhibiting 611
Carcinogenicity allylbenzene metabolites 831 ... 2-amino-3-methylimidazol[4,5-*f*]quinoline 9 ... aromatic aminosulphonic acids 635 ... Caramel Colour IV 431 ... chemical, evaluation and updated UK view 663 ... ferric chloride lacking in F344 rats 837 ... of γ-oryzanol in B6C3F$_1$ mice 49 ... of γ-oryzanol in F344 rats 41 ... hydroquinone in F344/N rats and B6C3F$_1$ mice 737 ... phytic acid 'Daiichi' 117 ... polycyclic aromatic hydrocarbons, book review 819 ... squid in rats 695 ... stevioside in rats 957 ... thiabendazole 347 ... tragacanth gum lacking in B6C3F$_1$ mice 673 ... wild mushrooms 1076
Carminic acid (Natural Red 4) genotoxicity studies 759
Carnosic acid antioxidant action of albumin against 483
Carnosol antioxidant action of albumin against 483
Carotenoids passive smoking and 347
Carrageenan-induced inflammation isopropanol inhibition 631
Casein trypsinized, as nitrite scavenger 617
Cation transport inhibitors renal toxicity of thiabendazole and 1021
CD-1 mice dietary imbalance effect on spermatogenesis 29
CDF$_1$ mice DNA adduct formation by 2-amino-3-methylimidazo[4,5-*f*]quinoline 9
CD rats dietary imbalance effect on spermatogenesis 29
Cell cycle sorbates effects in V79 cells 843
Cell proliferation BALB/3T3 cells by sodium orthovanadate treatment 307 ... colon epithelial cells, phytosterols inhibiting 611
Cell transformation *see* Transformation
Cellulose occupational asthma and skin complaints 348
Cereal-based diet purified diet comparison in feeding studies 601
Cerebral blood flow caffeine effect 545
α-Chaconine genotoxicity absent 689
Chemicals allergen detection, local lymph node assay (LLNA) comparison with guinea pig maximization test [GPMT) 65 ... carcinogenicity, evaluation and updated UK view 663
Chick RPR-V (organophosphate) teratogenicity and embryotoxicity 945
Children foods for 826
Chilli ground red, feeding study in B6C3F$_1$ mice 783
Chinese hamster ovary (CHO) cells clastogenic activity of caramel colours 389, 397, 403 ... genetic toxicology of acrylic acid 505
Chloramine formation by detergents and blindness 828
Chlortetracycline veterinary residue detection and concerns 1072
Chlorthiamid tissue-binding and toxicity in olfactory mucosa 871
Cholesterol coffee and 538 ... reduction with mycoprotein 1077
Cholestyramine dietary, ochratoxin A elimination 709
Chromosomal aberrations acrylic acid testing 505 ... Green S causing 827 ... salted/sun-dried and oil-fried foods 1077 ... zinc chloride 665
Chronic toxicity oral, of stevioside in rats 957
Cinnamaldehyde toxicokinetics in F344 rats 997
Citral inhaled, developmental toxicity evaluation 269
Clastogen caesium chloride, fruit extracts protecting against toxicity 865
Clastogenic activity absent in caramel colours 389
Clorsulon induction of urothelial cell hyperplasia 297
Coagulation Brussels sprouts and 664 ... butylated hydroxytoluene (BHT)-induced haemorrhages not due to 89
Cocamidopropyl betaine (CAPD) allergy 827
Cochineal carminic acid (natural red 4) in and genotoxicity studies 759

Coconut oil effects on retention and distribution of mercury 703
Cod liver oil effects on retention and distribution of mercury 703
Coffee adenosine receptors and 548 ... asthma and 545 ... cancer genesis 541 ... cancer risk and 539 ... cholesterol and 538 ... coronary heart disease and 534 ... decaffeinated *v.* regular 548 ... delayed conception and 543 ... dyspepsia and 543 ... effect on premenstrual syndrome 541 ... immune system and 549 ... liver enzymes and 549 ... miscellaneous effects 549 ... mutagenic and antimutagenic effects 547 ... review of research 533
Cola drinks caramel colour in see Caramel Colour IV
Colon epithelial cell proliferation, phytosterols effect 611
Colon cancer decreased risk of death with aspirin 348
Colour additives caramel colours see Caramel colours
Conception delayed, coffee and 543
Contact allergen detection, local lymph node assay (LLNA) comparison with guinea pig maximization test (GPMT) 65
Contact dermatitis colour text reviewed 817 ... ethyl 2-bromo-*p*-methoxyphenylacetate 828
Contamination food see Food contamination
Cooked beef micronuclei formation and 664 ... mutagen formation inhibited by carbohydrates 681
Corneal staining FD & C colours 1051
Coronary heart disease (see also Atherosclerosis) ... coffee and 534 ... eggs and 827 ... fish oil consumption and 664
Cosmetics aflatoxins in 993 ... safety evaluation of ingredients in EC countries 809
Coumarin metabolism by liver microsomes 99 ... metabolism by liver microsomes in different species 105
Cumin seeds anticarcinogenic effects ... 953
Cyanide increase in brain tyrosine levels, mechanism 973
Cyclophosphamide changes induced in mice and *Caralluma tuberculata* effects on 719
Cytochrome *P*-450 cooked Brussels sprouts effect on profile of 17 ... indole-3-carbinol effects on 589 ... induction by indolyl glucosinolates 927
Cytotoxicity *trans*-anethole and influence of modulators of epoxide metabolism 467
2,4-D non-Hodgkin's lymphoma and 347
Daiichi carcinogenicity study in rats 117 ... kidney damage 827
Decyl vinyl ether 17S
DEN-PH system for rapid screening of carcinogens 979
Dermal absorption see Percutaneous absorption
Detergents household, insomnia and blindness 828
Developmental toxicity (see also Teratogenicity) ... evaluation of inhaled citral 269
'Diarrhoetic' shellfish toxin mouse bioassay evaluation 139
Diazoquinone proteins and amino acids inhibition of formation 617
Dibenzofurans book review 818
Dibenzyl ether safety evaluation 559
3,5-Dibromo-4-hydroxybenzonitrile tissue-binding and toxicity in olfactory mucosa 871
Di-*n*-butyltin dichloride foetal malformations and 348
Dichlorbenil analogues tissue-binding and toxicity in olfactory mucosa 871
2,6-Dichlorobenzamide tissue-binding and toxicity in olfactory mucosa 871
2,6-Dichlorobenzonitrite (dichlorbenil) tissue-binding and toxicity in olfactory mucosa 871
2,4-Dichlorophenol death from 828
2,6-Dichlorothiobenzamide (chlorthiamid) tissue-binding and toxicity in olfactory mucosa 871
Dichlorvos micronuclei induced 827
Diesel engine emissions 173
Diet (see also Food) ... cereal-based and purified diets comparison in feeding studies 601 ... cholestyramine, ochratoxin A elimination 709 ... ergotamine, atherogenesis and 731 ... genotoxins, fatty acids activation of 853 ... imbalances effect on spermatogenesis 29 ... Japanese and menopausal symptoms 1077 ... lactovegetarian and mixed, lead and cadmium elimination 281 ... nicotine in, passive smoking and 347 ... phenolic substances, and antioxidant action of albumin against 483 ... phytosterol effect on colon carcinogenesis 611 ... retinyl palmitate, polychlorinated biphenyls effects on enzymes 723
Dietary fats effects on retention and distribution of mercury 703 ... micronucleus frequency in lymphocytes 585
Diethylethanolamine nasal cavity irritation 828
Di-(2-ethylhexyl) phthalate fertility assessment after 915 ... inhalation toxicity study 915
Diethylnitrosamine carcinogenicity screening by rapid bioassay system 979
2,6-Difluorobenzamide (DFBA) tissue-binding and toxicity in olfactory mucosa 871
2,6-Difluorobenzonitrile (DFBN) tissue-binding and toxicity in olfactory mucosa 871
6,7-Dihydrogeraniol 19S
3,5-Diiodo-4-hydroxybenzonitrile tissue-binding and toxicity in olfactory mucosa 871
Dimethylamine (DMA) in squid 695
7,12-Dimethylbenz[a]anthracene (DMBA) DNA adduct formation, inhibited by butylated hydroxytoluene 455 ... mammary tumorigenesis, inhibited by butylated hydroxytoluene 455
2,4-Dimethylbenzyl acetate 21S
2,6-Dimethyl-2-heptanol 23S
3,8-Dimethyl-3*H*-imidazo[4,5-*f*]quinosaline-2-amine (MeIQx) reversible binding to lignin-enriched preparations 239
3,7-Dimethyl-7-methoxyoctan-2-ol 25S
3,7-Dimethyl-2,6-nonadienenitrile 27S
Dimethyltetrahydrobenzaldehyde 29S
Dinitro-*o*-cresol DNA damage in liver cells 347
Diquat parkinsonism syndrome 1077
DNA adduct formation by 2-amino-3-methylimidazo-[4,5-*f*]quinoline 9 ... damage, methylenediphenyl diisocyanate 828 ... damage in liver cells from fenarimol and dinitro-*o*-cresol 347 ... DMBA-induced adduct formation, inhibited by butylated hydroxytoluene 455 ... repair, sorbic acid effect 1 ... synthesis, nafenopin effects 937
DNA, unscheduled synthesis (see also Genotoxicity) ... genetic toxicology of acrylic acid 505 ... in hepatocytes, secondary metabolites of *Fusarium moniliforme* effect 233 ... induction by allylbenzene metabolites 831
Docosahexaenoic acid hepatic activation of dietary genotoxins 853
Draize eye irritation method alternative methods 1061
Drinking water teratogenicity of FD & C Yellow No. 5 263
Drug-metabolizing system indolyl glucosinolates influencing 927 ... phenolic smoke condensates effect 771 ... polychlorinated biphenyls effects on 723
Dry-cleaning tetracholoroethene levels in blood 828
DT-diaphorase (DTD) cooked Brussels sprouts effect on 17
Dyspepsia coffee and 543

Eco-labelling 173
Eggs coronary heart disease and 827
Eicosapentaenoic acid hepatic activation of dietary genotoxins 853
Ellagic acid mutagenicity of IQ inhibited 289
Embryo fibroblasts sorbate genotoxicity and cell transformation 669
Embryotoxicity propenoic acid 803 ... RPR-V (organophosphate) 945
Emulsifiers food 825
Environmental carcinogens book review 818

Environmental risk factors in Parkinson's disease 343
Environmental sources food contamination, book review 171
Enzymes drug-metabolizing see Drug metabolizing system ... indole-3-carbinol effects on 589 ... induction by indolyl glucosinolates 927 ... phase II, cooked Brussels sprouts effect on 17
Eosinophilia–myalgia syndrome 71
Epoxide metabolism, modulator influence on *trans*-anethole cytotoxicity 467
Epoxide hydrolase effect on *trans*-anethole cytotoxicity 467
4,5-Epoxy-2-hexenoic acid genotoxicity and cell cycle effects 843
Ergogenic agent caffeine 549
Ergotamine dietary and atherosclerosis 731
Erythrocyte micronucleus assays potato alkaloid genotoxicity absent 689
Ester gum genotoxicity 627
Ethics of using animals in biomedical research, book review 1069
Ethoxyresorufin deethylation (EROD) cooked Brussels sprouts effect on 17 ... indole-3-carbinol effect 589
Ethyl acetoacetate feeding study in rats 567
Ethyl 2-bromo-*p*-methoxyphenylacetate allergic contact dermatitis 828
Ethylene dodecanedioate 31S
Ethyl 2-methoxybenzyl ether 33S
Eucalyptus citriodora oil acetylated 35S
European Community (EC) caramel colours and 354 ... Scientific Committee for Food 35A
Eye irritation alternative methods for determining 1061 ... FD & C colours 1051

F344 rats see Fischer 344 rats
Faeces elimination of lead and cadmium with different diets 281
Fats dietary see Dietary fats
Fatty acids hepatic activation of dietary genotoxins 853
FD & C Blue No. 1 eye irritation and corneal staining potential 1051
FD & C Blue No. 1 aluminium lake eye irritation and corneal staining potential 1051
FD & C Yellow No. 5 eye irritation and corneal staining potential 1051 ... teratogenicity 263
Feeding study cereal-based *v.* purified diets 601 ... ethyl acetoacetate in rats 567 ... ground red chilli in B6C3F$_1$ mice 783 ... methyl isoeugenol 475
Feline interferon intravenous toxicity study in rats 1057
Fenarimol DNA damage in liver cells 347
Ferric chloride carcinogenicity lacking in F344 rate 837
Fertility assessment, di-(2-ethylhexyl) phthalate inhalation 915
Fibroblasts sorbate genotoxicity and cell transformation 669
Fischer 344 rats caramel colour IV toxicity and carcinogenicity 431 ... cinnamaldehyde toxicokinetics 997 ... ferric chloride lacking carcinogenicity 837 ... hydroquinone carcinogenicity and toxicity 737 ... γ-oryzanol carcinogenicity 41 ... percutaneous absorption of compounds 891 ... phytic acid 'Daiichi' carcinogenicity 117 ... subchronic toxicity study of Caramel Colour II 411
Fish salted/sun-dried and oil-fried, and chromosomal aberrations 1077
Fish oils heart disease and 664 ... pregnancy duration and birth weight 827
Fixed-dose procedure (FDP) statistical evaluation 313
Flavonoids antioxidant action of albumin against 483
Flow-through diffusion cell system percutaneous absorption *in vitro* model 891
Flukicide clorsulon and urothelial cell hyperplasia induction 297
4-Fluorochalcone oxide cytosolic epoxide hydrolase inhibition and *trans*-anethole cytotoxicity 467
Foetal malformations (see also Teratogenicity) ... di-*n*-butyltin dichloride and 348
Foetal toxicity boric acid 1077
Food (see also Diet) ... for infants and young children 826 ... review of carcinogenic chemicals in 327 ... safety, pesticide residues and, book review 341 ... safety assessment strategies, book review 817 ... salted, sun-dried and oil-fried, chromosomal aberrations 1077 ... smoking and effect of phenolic smoke condensates on drug metabolizing systems 771 ... veterinary residue determination, book review 661
Food additives (see also Caramel colours) ... genotoxicity studies on ester gum 627 ... hickory-smoke condensates and tumour-promoting potential 859 ... phytic acid 'Daiichi', carcinogenicity 117
Food contaminants book review 171 ... carcinogenic 327
Food emulsifiers 825
Food mutagens formation in fried beef patties and carbohydrate inhibition of 681 ... IQ see IQ
Food packaging polystyrene, styrene migration 225
Food-simulating solvents styrene migration from polystyrene to 225
Food stabilizers 825
Forestomach tumours caffeic acid and 347 ... propionic acid and 333
1-Formyl-1-methyl-4(4-methylpentyl)-3-cyclohexene 37S
Fragrance and flavour ingredients citral, developmental toxicity 269
Fragrance raw materials Monographs on 1S
Freshwater quality, Royal Commission report 1072
Fruit allergic reactions to latex and 665
Fruit extracts protection against caesium toxicity 865
Fumonisin B$_1$ toxicokinetics in rats 277 ... unscheduled DNA synthesis in hepatocytes 233
Fund for the Replacement of Animals in Medical Experiments (FRAME) 661
Fungicide methyl isothiocyanate in wine 821 ... prochloraz, metabolism in rat 575
Fusarin C unscheduled DNA synthesis in hepatocytes 233
Fusarium moniliforme effect of secondary metabolites on unscheduled DNA synthesis 233 ... fumonisin B$_1$ toxicokinetics 277 ... mycotoxins and genotoxicity 233

Galbanum resin 39S
Gastric injury smoke flavouring-induced 1005
Gastric mucosa protection from toxic damage by uric acid pretreatment 525
Genetic toxicology acrylic acid 505
Genotoxicity (see also DNA, unscheduled synthesis) ... absent in potato alkaloids 689 ... allylbenzene metabolites 831 ... aromatic aminosulphonic acids 635 ... assessment of caramel colours 389 ... assessment of Caramel Colours III and IV 403 ... cadmium chloride, inhibition by germanium oxide 521 ... carminic acid (Natural Red 4) 759 ... dietary fats 585 ... ester gum 627 ... *Fusarium moniliforme* mycotoxins 233 ... 'Gudakhu' 1045 ... potassium bromate 251 ... short-term tests of caramel colour I 397 ... sorbates 669, 843 ... sorbic acid and potassium sorbate 1
Genotoxins dietary, fatty acids activation of 853
Geranyl linalool 41S
Germanium oxide inhibition of cadmium chloride mutagenicity 521
Glomerulonephritis immune complex, vomitoxin-induced 499
Glucosinolates influence on metabolism of metronidazole and antipyrine 927
Glucuronyl transferase cooked Brussels sprouts effect on 17 ... indole-3-carbinol effects on 589

γ-Glutamyl transpeptidase as indicator of ochratoxin A-induced nephropathy 213 ... phenoclor DP6 effect 133
Glutathione depletion, effect on *trans*-anethole cytotoxicity 467 ... depletion, thiabendazole nephrotoxicity in mice 247 ... gastric, smoke flavouring-induced gastric injury 1005
Glutathione *S*-transferase (GST) cooked Brussels sprouts effect on 17
Glycoalkaloids potato, genotoxicity absent 689
Green S chromosomal effects 827
'Gudakhu' genotoxicity 1045
Guinea pig maximization test (GPMT) local lymph node assay comparison for allergen detection 65
Guinea pigs ascorbic acid supplementation effect on biodisposition of benzanthrone 967 ... assay comparison with local lymph node assay 65, 165 ... benzanthrone disposition 517, 967 ... cadmium-induced lipid peroxidation and ascorbic acid effect 1011 ... endogenous formation of *N*-nitroso compounds 765 ... phototoxicity testing 155

Haematological parameters TBTO effects in monkeys 715
Haemorrhages butylated hydroxytoluene (BHT)-induced 89
Haemotoxicity trifluralin 1031
Hamsters cereal-based and purified diet comparison 601
Headaches caffeine withdrawal 545
Heart disease see Coronary heart disease
HEMF in soy sauce and inhibition of carcinogen-induced tumour formation 827
Hepatic peroxisome proliferation nafenopin effects 937
Hepatic post-mitochondrial fractions fatty acid activation of dietary genotoxins 853
Hepatocarcinogenicity carcinogen screening by rapid bioassay system 979 ... of squid in rats 695
Hepatocellular adenomas (see also Liver tumours) ... hydroquinone causing 737
Hepatocytes *trans*-anethole cytotoxicity and influence of modulators of epoxide metabolism 467 ... indole-3-carbinol effects comparison with *in vivo* changes 589 ... unscheduled DNA synthesis, secondary metabolites of *Fusarium moniliforme* effect 233
Hepatomas (see also Liver tumours) ... anticarcinogenic effects of Indian plant products 953
Hepatotoxicity of squid in rats 695
Herbicides Dichlorbenil analogues and tissue-binding and toxicity in olfactory mucosa 871 ... 2,4-D and non-Hodgkin's lymphoma 347 ... Parkinson's disease induced by 344 ... trichlorpyr butoxyethyl ester, percutaneous absorption 891 ... trifluralin, toxicology 1031
Heterocyclic aromatic amines HPLC sensitivity optimization for detection 491
5-(*cis*-3-Hexenyl)dihydro-5-methyl-2(3*H*)-furanone 43S
***cis*-3-Hexenyl hexanoate** 45S
***cis*-3-Hexenyl valerate** 47S
Hickory-smoke condensate effects on pepsinogen-altered pyloric glands in rats 859
High-performance liquid chromatography (HPLC) sensitivity optimization in heterocyclic aromatic amine detection 491
Hippuric acid cinnamaldehyde toxicokinetics 997
Hydroquinone toxicity and carcinogenicity in F344/N rats and B6C3F$_1$ mice 737
Hydroxycoumarins coumarin metabolism by liver microsomes in different species 105
3-(4-Hydroxy-4-methylpentyl)-3-cyclohexene-1-carboxaldehyde 49S
4-(4-Hydroxy-4-methylpentyl)-3-cyclohexene-1-carboxaldehyde 49S
***o*-Hydroxypenylacetaldehyde** coumarin metabolism by liver microsomes in different species 105 ... identification as coumarin metabolite in microsomes 99
***o*-Hydroxyphenylacetic acid** coumarin metabolism by liver microsomes in different species 105
Hyperammonaemia cyanide-induced and mechanism 973
Hypoxanthine–guanine phosphoribosyl transferase (HGPRT) genetic toxicology of acrylic acid 505

ICR mice acute renal toxicity of thiabendazole 1021
Imidazole fungicide prochloraz, metabolism in rat 575
Immune response vomitoxin-induced dysregulation 499
Immune system Caramel Colour III effects 749 ... coffee and 549 ... pentachlorophenol effects 665
Immunoglobulin A (IgA) vomitoxin-induced dysregulation 499
Immunoglobulin G (IgG) vomitoxin-induced dysregulation 499
Immunoglobulin M (IgM) vomitoxin-induced dysregulation 499
Immunotoxicity Caramel Colour III 427
Indian plant products anticarcinogenic effects 953
Indole-3-carbinol effect on biotransformation enzymes 589
Indolyl glucosinolates influence on metabolism of metronidazole and antipyrine 927
Infants foods for 826 ... preterm and newborn, caffeine effect 544
Inflammation iosopropanol effects in rats 631
Inhalation toxicity study di-(2-ethylhexyl) phthalate 915
Insecticides (see also Pesticides) ... chronic subclinical dietary intake of anticholinesterase agents 37
Insomnia household detergents 828
Interferon feline, intravenous toxicity study 1057
Intestinal mucosa cooked Brussels sprouts effect on cytochrome *P*-450 and enzymes 17 ... *in vivo* changes in enzymes due to indole-3-carbinol 589
Iodine in slimming creams, thyroid disease from 828
Ioxynil tissue-binding and toxicity in olfactory mucosa 871
IQ (2-Amino-3-methylimidazo[4,5-*f*]quinoline) antimutagenicity of ellagic acid 289 ... carcinogenicity 9 ... DNA adduct formation inhibition by linoleic acid derivatives 9 ... genotoxicity activation by fatty acids 853
Isobornyl methyl ether 53S
Isopropanol effects on inflammatory reaction development in rats 631
2-Isopropenyl-5-methyl-4-hexen-1-ol 55S
***p*-Isopropylbenzyl acetate** 57S
Isopropylethylene glycol ether anaemia and 665

Japanese diet menopause and 1077
Joint FAO/WHO Expert Committee on Food Additives (JECFA) 351, 353, 417
Juniperus phoenicea oil 59S

Karo karounde absolute 61S
α-Ketoglutarate protection against nitroprusside intoxication 887
Kidney damage phytic acid in Daiichi 827
Kidney tumours caffeic acid and 347

Labelling eco-labelling 173
Lactoscatone 63S
Lactovegetarian diet faecal elimination of lead and cadmium 281
Large bowel cancer coffee and risk of 540
Lasalocid veterinary residue detection and concerns 1072
Latex allergic reactions and fruit association 665
Latex gloves allergic potential 665
Lavandin absolute 65S

LD_{50} fixed-dose procedure as alternative 313 ... phenolic smoke condensates 771
Lead faecal elimination in subjects on mixed/lactovegetarian diets 281
Leukaemia mononuclear cell, hydroquinone causing 737
Leukoderma due to perchloroethylene 828
Lignin enriched preparations from wheat bran, MeIQx binding 239
Lindane effect on oestradiol–receptor complex 879
Linoleic acid heat-altered derivatives and DNA adduct formation inhibition 9
Lipid cadmium-induced peroxidation and ascorbic acid effect 1011 ... dietary see Dietary fats ... peroxidation in liver, phenoclor DP6 effect 133
Liver rapid bioassay (DEN-PH) for carcinogen screening 979 ... toxic effects of pan masala 161
Liver enzymes coffee and 549 ... indole-3-carbinol effects on 589 ... phase II, cooked Brussels sprouts effect on 17 ... toxic effects of pan masala 161
Liver microsomes coumarin metabolism and *o*-hydroxyphenylacetaldehyde identification 99 ... coumarin metabolism to polar and covalently bound products 105 ... lipid peroxidation and phenoclor DP6 effect 133
Liver mucosa cooked Brussels sprouts effect on cytochrome *P*-450 and enzymes 17 ... *in vivo* changes in enzymes due to indole-3-carbinol 589
Liver tumours hepatoma and anticarcinogenic effects of Indian plant products 953 ... hydroquinone-induced hepatocellular adenomas 737 ... preneoplastic lesion development by NDMA and NPYR 921 ... preneoplastic lesion development by polybrominated biphenyls 921
Local lymph node assay (LLNA) 165 ... comparison with guinea-pig maximization test for allergen detection 65 ... guinea pig assay comparison 165 ... review on collaborative studies and directions 165
Longifolene 67S
Low-density lipoprotein cholesterol reduction with mycoprotein 1077
Lung cancer nickel and 1077
Lung damage sodium hydroxide 828
Lung haemorrhages butylated hydroxytoluene (BHT)-induced 89
Lung surfactant synthesis inducer (ambroxol), in paraquat poisoning 789
Lymph node assay local, comparison with guinea pig maximization test for allergen detection 65
Lymphocytes Caramel Colour III effects 749 ... Caramel Colour III effects on number 427 ... micronucleus frequency with dietary fats 585
Lyngbyatoxin A skin penetration 795

Maillard browning products antimutagenic effect 127
Mammary tumorigenesis DMBA-induced, inhibition by butylated hydroxytoluene (BHT) 455
Mandarin oil expressed 69S
Margarines heart disease deaths and 664
Marine algal toxin (lyngbyatoxin A) lyngbyatoxin A 795
Mastic absolute 71S
MeIQx see 3,8-Dimethyl-3*H*-imidazo[4,5-*f*]quinoxaline-2-amine (MeIQx)
Menopause Japanese diet and 1077
Mentha citrata oil 73S
Menthadiene-7-methyl formate 75S
Mercuric chloride whole-body retention and organ distribution, dietary lipids effect 703
Mercury whole-body retention and organ distribution, dietary lipids effect 703
Metabolism (see also Drug-metabolizing system) ... metronidazole and antipyrine, indolyl glucosinolate influence 927 ... prochloraz 575
Methoxy dicyclopentadiene carboxaldehyde 77S
3-(4-Methoxyphenyl)-3-methylbutylester (MPMBE) embryotoxicity in Wistar rat 803
8-Methoxypsoralen (8-MOP) phototoxicity testing in guinea pigs 155
4-Methylbenzyl acetate 79S
Methyl chloride formation by detergents and blindness 828
1-Methylcyclododecyl methyl ether 81S
Methylcyclooctyl carbonate 83S
Methyl dihydrojasmonate 85S
Methylenediphenyl diisocyanate DNA damage 828
Methyleugenol unscheduled DNA synthesis induction 831
5-Methyl-3-heptanone oxime 87S
Methyl isoeugenol feeding study in rats 475
Methyl isothiocyanate in wine 821
Methylmercury chloride whole-body retention and organ distribution, dietary lipids effect 703
1-Methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP) Parkinson's disease model 343
***N*-Methyl-2-[^{14}C]pyrrolidinone (NMP)** dermal absorption with 2-[^{14}C]pyrrolidinone 57
2-Methylundecanal dimethyl acetal 89S
Metronidazole indolyl glucosinolate effect on metabolism of 927
Mice (see also individual strains) ... benzanthrone disposition 517 ... cereal -based and purified diet comparison 601 ... cyanide-induced increase in brain tyrosine levels 973 ... cyclophosphamide-induced changes and *Caralluma tuberculata* effects on 719 ... dichlorbenil analogue toxicity and tissue-binding 871 ... ochratoxin A as renal carcinogen 205, 213 ... piperonyl butoxide toxicity in three-generation study 1015
Micronuclei dichlorvos inducing 821 ... erythrocyte assay, potato alkaloid genotoxicity absent 689 ... formation by 'Gudakhu' 1045 ... formation and cooked beef consumption 664 ... frequency in lymphocytes with dietary fats 585
Mineral oils pulmonary fibrosis and 1078
Ministry of Agriculture, Fisheries and Food (MAFF) 352
Mongolian gerbil coumarin metabolism by liver microsomes 105
Moniliformin unscheduled DNA synthesis in hepatocytes 233
Monkeys TBTO effects on blood parameters 715
Mood caffeine effect 541
Mouse bioassay 'diarrhoetic' shellfish toxin application 139
MPMBE (3-(4-Methoxyphenyl)-3-methylbutylester) embryotoxicity 803
MPTP see 1-Methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP)
Murine local lymph node assay *see* Local lymph node assay (LLNA)
Mushrooms wild and carcinogenicity 1076
Mutagenicity (see also Antimutagenic effects) ... absent in caramel colours 389 ... cadmium chloride, inhibition by germanium oxide 521 ... coffee 547 ... nitrite, inhibitory action of proteins and amino acids 617 ... sodium sorbate 1
Mutagens food see Food mutagens ... IQ see IQ ... MeIQx, binding to lignin-enriched wheat bran preparations 239
Mutations somatic, in Drosophila from sorbates 843
Mycoprotein low-density lipoprotein cholesterol reduction 1077
Mycotoxic porcine nephropathy (MPN) see Porcine mycotoxic nephropathy
Mycotoxins (see also Aflatoxin B_1; Fumonisin B_1; Ochratoxin A) ... *Fusarium moniliforme* and genotoxicity of 233
Myrosinase indolyl glucosinolate treatment and drug metabolism 927
Myrrh absolute 91S
Myrtenol 93S

Nafenopin species differences in effects 937
β-Naphthyl isobutyl ether 95S
Nasal cavity irritation, diethylethanolamine 828
Nasal tumours Preneoplastic lesion development by NDMA, NPYR and polybrominated biphenyls 921
Natural Red 4 (carminic acid) genotoxicity studies 759
NDMA (*N*-nitrosodimethylamine) preneoplastic lesion development 921
Nephrocalcinosis ethyl acetoacetate feeding study 567
Nephropathy Balkan endemic see Balkan endemic nephropathy ... Porcine mycotoxic 201, 213
Nephrotoxicity butylated hydroxytoluene (BHT) in mice 89 ... potassium bromate 251 ... thiabendazole, sex differences in mice 247
Nerol oxide 97S
Neurobehavioural effects piperonyl butoxide in three-generation toxicity study 1015
Nickel sinonasal and lung cancer 1077
Nicotine dietary and passive smoking 347
Nicotinic acid percutaneous absorption 891
Nitrate daily intake information 1072
Nitrite daily intake information 1072 ... proteins and amino acids as scavengers 617
Nitroprusside protection against intoxication 887
Nitrosamines in rubber bands used for orthodontic purposes 325
***N*-Nitroso compounds** daily intake information 1072 ... endogenous formation in guinea pigs after supplementation 765
***N*-Nitrosodibutylamine** In rubber bands used for orthodontic purposes 325
***N*-Nitrosodimethylamine** preneoplastic lesion development 921 ... proteins and amino acids inhibition of formation 617
***N*-Nitrosopiperidine** in rubber bands used for orthodontic purposes 325
***N*-Nitrosoproline (NPRO)** endogenous formation in guinea pigs after supplementation 765
***N*-Nitrosopyrrolidine** preneoplastic lesion development 921
***N*-Nitrosothioproline (NTPRO)** endogenous formation in guinea pigs after supplementation 765
NMP see *N*-methyl-2-[^{14}C]pyrrolidinone
Non-Hodgkin's lymphoma 2,4-D and 347
NPYR (*N*-nitrosopyrrolidine) preneoplastic lesion development 921

Occupational exposures perchloroethylene 828 ... sodium hydroxide 828 ... tetrachloroethane 828
Ocratoxin A analytical methods 201 ... in blood and pharmacokinetic properties 201 ... in disease causation 213 ... enzymes as indicators of nephropathy 213 ... role in Balkan endemic nephropathy 201, 205 ... secretion in cholestyramine-fed rats 709 ... tissue analysis 213
Ocular irritation see Eye irritation
Oesophageal cancer pickled vegetables and 1077
Oestradiol–receptor complex pesticides effect 879
Olfactory mucosa dichlorbenil analogue tissue-binding effect and toxicity 871
Oral toxicity stevioside in rats 957
Organophosphates RPR-V, teratogenicity and embryotoxicity 945
Orthodontics Nitrosamines in rubber bands used in 325
γ-Oryzanol carcinogenicity in B6C3F$_1$ mice 49 ... carcinogenicity in F344 rats 41
Osborne–Mendel rats teratogenicity of FD & C Yellow No. 5 263
Ovarian cancer coffee and risk of 540
10-Oxahexadecanolide 99S
Oxfendazole veterinary residue detection and concerns 1072
Oxolinic acid veterinary residue detection and concerns 1072
Oxytetracycline veterinary residue detection and concerns 1072

Packaging, food in polystyrene, styrene migration 225
Pancreatic cancer coffee and risk of 539
Pan masala evaluation for toxic effects 161
Papillary necrosis rat model, in role of ochratoxin A in Balkan endemic nephropathy 205
Paraquat poisoning biochemical effects 789 ... novel pharmacological approach using ambroxol 789 ... parkinsonism and 344
Parkinsonism syndrome diquat 1077 ... paraquat poisoning and 344
Parkinson's disease environmental risk factors 343 ... epidemiology 344 ... MPTP model 343 ... pesticide-induced 344
Passive smoking carotenoid confounding and 347 ... dietary nicotine and 347
Peak E substance in tryptophan, identification of substances formed by 71
Pentachlorophenol effects on immune system 665
Pentoxyresorufin depentylation (PROD) cooked Brussels sprouts effect on 17 ... indole-3-carbinol effect 589
Pepsinogen 1-altered pyloric glands hickory-smoke condensate effects 859
Perchloroethylene skin pigmentation loss 828
Percutaneous absorption benzoic acid and triclorpyr butoxyethyl ester 891 ... benzyl acetate, effect of vehicle and occlusion 145 ... co-administered *N*-methyl-2-[^{14}C]pyrrolidinone (NMP) and 2-[^{14}C]pyrrolidinone (2-P) 57 ... *in vitro* model comparison with *in vivo* data 891 ... nicotinic acid and phenol 891
Peroxisome proliferation nafenopin effects and species differences 937
Pesticides advisory committee report 1072 ... DNA damage in liver cells 347 ... effect on oestradiol–receptor complex 879 ... Parkinson's disease induced by 344 ... residues, food safety and, book review 341
Petitgrain bigarade oil 101S
Pharmacokinetics ochratoxin A 201 ... selenium 903
Pharmacology ambroxol use in paraquat poisoning 789
Phenoclor DP6 effect on enzyme-altered foci and lipid peroxidation in liver 133
Phenol percutaneous absorption 891
Phenolic smoke condensates effect on hepatic drug metabolizing systems 771
Phenolic substances antioxidant action of albumin against 483
Phenylacetaldehyde 2,4-dihydroxy-2-methylpentane acetal 103S
Phenylethyl methacrylate 105S
Phosphoenolpyruvate carboxykinase as indicator of ochratoxin A-induced nephropathy 213
Phototoxicity testing in guinea pigs 155
Phthalates inhalation toxicity study 915
***Phyllanthus emblica* fruit extracts** protection against caesium toxicity 865
Phytic acid in Daiichi and kidney damage 827
Phytic acid 'Daiichi' carcinogenicity 117 ... kidney damage 827
Phytosterols effect on colon epithelial cell proliferation 611
Pickled vegetables oesophageal cancer and 1077
***cis*-2-Pinanol** 107S
Piperonyl butoxide three-generation toxicity study 1015
Plasticizer di-(2-ethylhexyl)phthalate toxicity study 915
Polybrominated biphenyls Preneoplastic lesion development 921
Polychlorinated biphenyls effects on drug-metabolizing enzymes in rats 723 ... effects on hepatic/ renal vitamin A 723

Polychlorinated dioxins book review 818
Polycyclic aromatic hydrocarbons chemistry and carcinogenicity, book review 819
Polystyrene styrene migration from 225
Polyurethane lacquer thrombocytopenia and 348
Poppy seeds anticarcinogenic effects 953
Porcine mycotoxic nephropathy ochratoxin A and 201, 213
Potassium bromate nephrotoxicity 251 ... renal tumour-initiating activity 251
Potassium sorbate genotoxicity and cell cycle effects 843 ... genotoxic potential evaluation 1
Potato alkaloids genotoxicity absent 689
Pregnancy duration, fish oil effect 827
Premenstrual syndrome coffee effect 541
Preterm infants caffeine effect 545
Primates selenium pharmacokinetics 903
Prochloraz metabolism in rat 575
Proline supplementation and endogenous formation of *N*-nitroso compounds after 765
Prometryne effect on oestradiol–receptor formation of *N*-nitroso compounds after 765
Propenoic acid embryotoxicity in Wistar rat 803
Propionic acid forestomach tumorigenesis and 333
Propyl gallate antioxidant action of albumin against 483
Propyl phenethyl acetal 109S
Proteins as nitrite scavenger 617
Pseudo linalyl acetate 111S
Publication reviews 171, 341, 661, 817, 1069
Pulmonary fibrosis mineral oils and 1078
Purified diet cereal-based diet comparison in feeding studies 601
Pyloric glands pepsinogen 1-altered and hickory-smoke condensate effects 859
2-[^{14}C]Pyrrolidinone (2-P) dermal absorption with *N*-methyl-2-[^{14}C]pyrolidinone 57

Quorn low-density lipoprotein cholesterol reduction 1077

Rabbits dietary ergotamine and atherosclerosis 731
Rats (see also specific strains and other specific topics) ... ambroxol use in paraquat poisoning 789 ... benzanthrone disposition 517 ... Brussels sprouts effects on cytochrome *P*-450 and phase II enzymes 17 ... cereal-based and purified diet comparison 601 ... coumarin metabolism by liver microsomes 99, 105 ... dietary cholestyramine effect on ochratoxin A elimination 709 ... DMBA-induced mammary tumorigenesis inhibited by BHT 455 ... ethyl acetoacetate feeding study 567 ... fumonisin B_1 toxicokinetics 277 ... hickory-smoke condensates and tumour-promoting potential 859 ... indole-3-carbinol effects on biotransformation enzymes 589 ... intravenous toxicity study with feline interferon 1057 ... methyl isoeugenol feeding study 475 ... papillary necrosis and carcinoma model, in role of ochratoxin A in Balkan endemic nephropathy 205 ... percutaneous absorption of NMP and 2-P 57 ... pesticides effect on oestradiol–receptor complex 879 ... phenochlor DP6 effect on enzyme-altered foci and lipid peroxidation 133 ... prochloraz metabolism 575 ... squid hepatotoxicity and hepatocarcinogenicity 695 ... uric acid pretreatment and gastric mucosa protection 525 ... urothelial cell hyperplasia induced by clorsulon 297
Renal carcinogen potassium bromate 251
Renal papilloma phytic acid 'Daiichi' causing 117
Renal parenchymal carcinoma ochratoxin A causing, in mice 205
Renal toxicity (see also Nephrotoxicity) ... thiabendazole in mice 1021
Renal tubular cell adenoma hydroquinone causing 737
Renal tumour initiating activity of potassium bromate 251
Reproductive effects piperonyl butoxide in three-generation toxicity study 1015
Reproductive toxicology gender balance 1071
Retinyl palmitate diets with, polychlorinated biphenyls effects on enzymes 723
Reviews carcinogenic chemicals in food 327 ... coffee/caffeine research 533 ... genotoxicity and carcinogenicity of aromatic aminosulphonic acids 635 ... murine local lymph node assay 165 ... propionic acid and forestomach tumorigenesis 333
Rhodinol 113S
RPR-V (organophosphate) teratogenicity 945
Rubber bands used for orthodontic purposes and nitrosamines in 325

Saccharomyces cerevisiae Caramel Colour III/IV genotoxicity testing 403
Safety evaluation (see also Food, safety) ... cosmetics ingredients in EC countries 809 ... dibenzyl ether 559
Safrole unscheduled DNA synthesis induction 831
***Salmonella typhimurium* test** fatty acid activation of dietary genotoxins 853 ... potato alkaloid genotoxicity absent 689
Scientific Committee on Cosmetology (SCC) 809
Scientific Committee for Food (EC) 354
Sclareol 115S
Selenium absorption, distribution and elimination 903
L-Selenothionine selenium pharmacokinetics 903
Sex differences thiabendazole nephrotoxicity in mice 247
Shellfish toxins 'diarrhoetic', mouse bioassay evaluation 139
Short-chain fatty acids forestomach tumorigenesis and 333
Short-term tests (STTs) 663 ... Caramel Colour I genotoxicity 397
Sinonasal cancer nickel and 1077
Skin absorption see Percutaneous absorption ... disorders, cellulose and xylanase association 348 ... penetration, marine algal toxin (lyngbyatoxin A) 795 ... pigmentation, loss due to perchloroethylene 828
Sleepiness caffeine effect 541
SMART test sorbates effect 843
Smoke hickory see Hickory-smoke condensate ... phenolic condensates effect on hepatic drug metabolizing systems 771
Smoke flavouring gastric injury and gastric glutathione role 1005
Smoking passive see Passive smoking
Sodium hydroxide lung damage 828
Sodium nitrate supplementation and endogenous formation of *N*-nitroso compounds after 765
Sodium nitroprusside protection against intoxication 887
Sodium orthovanadate proliferation and transformation of BALB/3T3 cells 307
Sodium sorbate genotoxicity and cell cycle effects 843 ... mutagenicity 1
Sodium thiosulphate protection against nitroprusside intoxication 887
Solanidine genotoxicity absent 689
α-Solanine genotoxicity absent 689
Solvents peak exposure and recovery 665
Sorbates cell transformation 669 ... genotoxicity 669, 843
Sorbic acid genotoxic potential evaluation 1
Soy sauce inhibition of carcinogen-induced tumour formation 827
Species differences nafenopin effects 937
Spermatogenesis dietary imbalance effect 29
Sprague–Dawley rats *trans*-anethole cytotoxicity and influence of modulators of epoxide metabolism 467 ... developmental toxicity evaluation of inhaled citral 269 ... ethyl acetoacetate feeding study 567 ... fatty acid activation of dietary genotoxins 853 ... feeding study of methyl isoeugenol 475 ... nafenopin effects 937 ...

phenoclor DP6 effect on enzyme-altered foci and lipid peroxidation in liver 133 ... polychlorinated biphenyls effects on drug-metabolizing enzymes and vitamin A 723 ... preneoplastic lesions development by NDMA and NPYR 921
Spraying season chronic subclinical dietary intake of anticholinesterase agents 37
Spruce oil 117S
Squid hepatotoxicity and hepatocarcinogenicity 695
Statistics evaluation of fixed-dose procedure (FDP) 313 ... handbook review 662
Steering Group on Food Surveillance 1071, 1072
Stevioside oral toxicity and carcinogenicity 957
Stilbene veterinary residue detection and concerns 1072
Stomach cancer hickory-smoke condensates and 859
Stomach injury smoke flavouring-induced 1005
Styrene migration from polystyrene 225
Subchronic toxicity Caramel Colour II 411
Sugars Maillard browning products and antimutagenic effects 127
Sulphadimidine veterinary residue detection and concerns 1072
Sulphaquinoxaline vetarinary residue detection and concerns 1072
Surfactant lung, synthesis inducer (ambroxol) in paraquat poisoning 789
Swiss mice anticarcinogenic effects of Indian plant products 953
Syrian hamster coumarin metabolism by liver microsomes 105 ... embryo fibroblasts, sorbate genotoxicity and cell transformation 669 ... nafenopin effects 937

TBTO (bis(tri-*n*-butyltin)oxide) effects on blood parameters in monkeys 715
Teratogenicity (see also Developmental toxicity; foetal malformations) ... boric acid 1077 ... FD & C Yellow No. 5 263 ... inhaled citral 269 ... RPR-V (organophosphate) 945
Testosterone thiabendazole nephrotoxicity in mice and 247
Tetrachloroethene blood levels 828
Tetrahydrogeranial 119S
Tetrahydro-4-methyl-2-(2-methylpropen-lyl)pyran 121S
Tetrahydro-pseudo-ionone 123S
Thiabendazole acute renal toxicity in mice 1021 ... sex differences in nephrotoxicity in mice 247 ... toxicity and carcinogenicity 347
Thioproline supplementation and endogenous formation of *N*-nitroso compounds after 765
Thrombocytopenia polyrethane lacquer and 348
Thyroid disease from iodine in slimming creams 828
Tobacco preparation 'Gudakhu', genotoxicity 1045
Toxicity Profiles (BIBRA) 83, 261, 453, 829
Toxicokinetics cinnamaldehyde in F344 rats 997 ... fumonisin B_1, in rats 277
Toxicology animals and alternatives, book review 661 ... hydroquinone in F344/N rats and B6C3F_1 mice 737 ... reproductive 1071 ... trifluralin 1031
Toxins shellfish see Shellfish toxins
Tragacanth gum carcinogenicity lacking in B6C3F_1 mice 673
Transformation BALB/3T3 cells by sodium orthovanadate treatment 307 ... sorbates 669
Bis(Tri-*n*-butyltin)oxide (TBTO) effects on blood parameters in monkeys 715
1,1,1-Trichloroethane allergic hives 828
2,4,6-Trichlorophenoxyacetic acid prochloraz metabolism to 575
2,4,6-Trichlorophenoxyethanol prochloraz metabolism to 575
Trichlorpyr butoxyethyl ester percutaneous absorption 891
4-Tricyclodecylidene butanal 125S
Trifluralin toxicology and hazard potential 1031
Trimethylamine in squid 695
Triomethylamine-*N*-oxide (TMAO) in squid 695
1,2,4-Trimethyl-3-cyclohexene-1-methanol 127S
1,3,5-Trimethyl-3-cyclohexene-1-methanol 127S
4-(2,6,6-Trimethyl-2-cyclohexen)-2-methylbutanal 129S
4-(2,6,6-Trimethyl-3-cyclohexen)-2-methylbutanal 129S
4-(2,4,6-Trimethyl-3-cyclohexen-1-yl)-3-buten-2-one 131S
2,6,10-Trimethyl-9-undecenal 133S
Tryptophan peak E substance, identification of substances formed by 71
Tumorigenesis DMBA-induced, inhibited by butylated hydroxytoluene 455
Tumour initiation by NDMA and NPYR and polybrominated biphenyls 921
Tumour promoters NDMA and NPYR and polybrominated biphenyls 921 ... rapid bioassay for carcinogen screening 979
Tyrosine brain level increase induced by cyanide 973
Tyrosine aminotransferase cyanide-induced decrease 973

Uric acid pretreatment in gastric mucosa protection 525
Urothelial cell hyperplasia clorsulon induction of 297
Urothelial tumours ochratoxin A role 205
Urticaria 1,1,1-trichloroethane 828
Uterus pesticides effect on oestradiol–receptor complex 879

V79 cells cell cycle effects of sorbates 843 ... genotoxicity of sorbates 843
Validation percutaneous absorption *in vitro* model 891
Vegetables pickled and oesophageal cancer 1077
Verbena absolute 135S
Verbena oil 137S
Veterinary residues detection and concerns 1072 ... determination in food, book review 661
Vitamin A hepatic/renal, polychlorinated biphenyls effects 723
Vitamin B_6 deficiency Caramel Colour III effects on immune system 749
Vitamin C see Ascorbic acid
Vitsamins handbook review 171
Vomitoxin dysregulation of immunoglobulin response 499

Wheat bran lignin-enriched preparations, MeIQx binding 239
Wine methyl isothiocynanate in 821
Wing spot test 843
Wistar rats cooked Brussels sprouts effect on cytochrome *P*-450 and enzymes 17 ... di-(2-ethylhexyl) phthalate inhalation toxicity study 915 ... indole-3-carbinol effects on biotransformation enzymes 589 ... oral toxicity casrcinogenicity of stevioside 957 ... propenoic acid embryotoxicity 803

Xylanase occupational asthma and skin complaints 348
Xylose-amino acid Maillard browning products and antimutagenic effects 127

Zinc chloride chromosomal aberrations 665

Typeset in Great Britain by BPC Digital Techset Ltd, Exeter. Printed by BPC Wheatons Ltd, Exeter. **237**